

# Four New Species of Serranid Fishes from Japan

Masao KATAYAMA  
(Yamaguchi University)

The Serranidae is the largest family of the percoids and contains many species which mostly are valuable as food. And yet the classification of the fishes is very imperfect and much confusion is met with in their nomenclature. With a view to lying the classification of the fishes in question on a sounder basis a study of their external and internal characters was undertaken under the supervision of Professor Kiyomatsu MATSUBARA. The result of this study will be published in the near future. In the present paper four new species are described.

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## 1. *Neoscombrops analis*, n. sp.

Bake-sumikui (new Japanese name)

Holotype : KATAYAMA's Fish Coll. No. 2447, 87 mm (107 mm), Owase, Mie Prefecture, March 5, 1954.

Description : D. IX, 1, 9 : A. III, 6 : P. 18 ; pored scales in lateral line to caudal base about 28 ; gill-rakers on first arch  $7+13=20$ . Head length 2.72 in body length ; greatest body depth 3.35 ; distance from origin of ventral to that of anal 28.1. Snout length 4.27 in head length ; upper jaw length 2.46 ; eye diameter 3.20 ; interorbital space 3.55 ; postorbital part of head 2.00 ; length of caudal peduncle 1.77 ; depth of

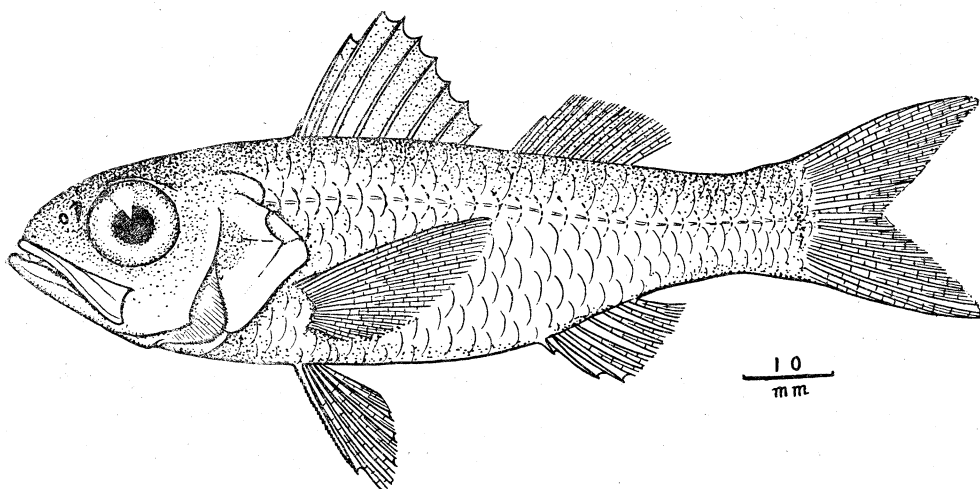


Fig. 1. Lateral view of *Neoscombrops analis*, n. sp. Holotype: No. 2447. 87 mm in standard length (107 mm in total length).

the same 2.91 ; pectoral fin length 1.39 ; length of ventral spine 2.28 ; length of longest dorsal spine (3rd one) 1.88 ; length of last dorsal spine 6.40 ; length of first anal spine 16.0 ; length of second anal spine 4.45 ; length of third anal spine 3.55 ; caudal fin length 1.52. Length of longest gill-raker on first arch 3.33 in eye diameter ; length of longest gill-lamella 3.33.

Body oblong compressed. Mouth somewhat large ; maxillary extending to below near middle of pupil ; lower jaw slightly projecting. Eye large the diameter much longer than snout length ; interorbital region slightly convex and rather wide, slightly narrower than eye diameter. Upper jaw with bands of villiform teeth which separated at the symphysis by a rather broad interspace ; a pair of strong canines in front on each side. Lower jaw with a small pair of canines on the symphysis and laterally with about 5 canines on each side ; a  $\wedge$ -shaped patch of small teeth on vomer and a narrow band of similar teeth on each palatine. Preopercle double edged and somewhat produced at the angle ; posterior margin of preopercle finely serrated ; anterior edge of preoperculum with a few serrations at lower angle ; subopercle truncate posteriorly ; subopercle and interopercle finely serrated ; opercle with two flat spines. Gill-rakers slender, pelvic spine serrated along outer edge. Scales cycloid and deciduous.

Coloration : In preservative, dark brown above the sides and lower surface pale ; the first dorsal becoming darker toward margin.

Remarks : The present new species is closely related to *Neoscombrops annectens*, but differs from it in having small number of pored scales (28 instead of 47 in the latter) and lower body. And the present species differs from *Synagrops japonicus* in having three anal spines, 18 pectoral fin rays (16 rays in the latter), higher body 3.35 as compared to 3.71 to 4.35 in body length in the latter and no small keels on outer surface of posterior portion of preoperculum near the lower angle.

## 2. *Lateolabrax latus* n. sp.

Hira-suzuki (new Japanese name)

*Labrax japonicus* (not CUVIER and VALENCIENNES) BLEEKER, 1853 : 23 (Nagasaki).

Holotype : KATAYAMA's Fish Coll. No. 1927, 182 mm (222 mm), Senzaki Yamaguchi Prefecture, November 20, 1953.

Paratypes : No. 2146, 165 mm (203 mm), Kôchi, April 8, 1952 ; No. 1589, 214 mm (262 mm), Numazu, April 9, 1953 ; No. 1926, 180 mm (221 mm), Senzaki, November 20, 1953 ; Nos. 2206 and 2207, 187 mm and 189 mm (224 mm and 225 mm), Senzaki, November 22, 1953 ; Nos. 2430 and 2431, 395 mm and 383 mm (471 mm and 456 mm), Nagasaki October 28, 1955.

Description : D. XIII, 15 ; A. III, 9 ; P. 16 ; pored scales in lateral line to caudal base 73 ; scales in a row from dorsal origin to lateral line 14, from lateral line to anal origin 15 ; gill-rakers on first arch  $8+15=23$ . Head length 3.14 in body length ; greatest body depth 3.31 ; distance from origin of ventral to that of anal 2.64. Snout length 3.41 in head length ; upper jaw length 2.42 ; eye diameter 4.83 ; interorbital space 4.14 ; postorbital part of head 2.00 ; length of caudal peduncle 17.6 ;

depth of the same 2.64 ; pectoral fin length 2.03 ; ventral fin length 1.70 ; length of ventral spine 2.76 ; length of longest dorsal spine (5th one) 2.42 ; length of penultimate dorsal spine 9.65 ; length of last dorsal spine 4.83 ; length of longest soft dorsal ray (3rd one) 2.07 ; length of first anal spine 9.65 ; length of second anal spine 2.76 ; length of third anal spine 2.76 ; length of longest anal ray (1st one) 2.23 ; caudal fin length 1.45. Length of longest gill-raker on first arch 1.33 in eye diameter ; length of longest gill-lamella of the same 1.71.

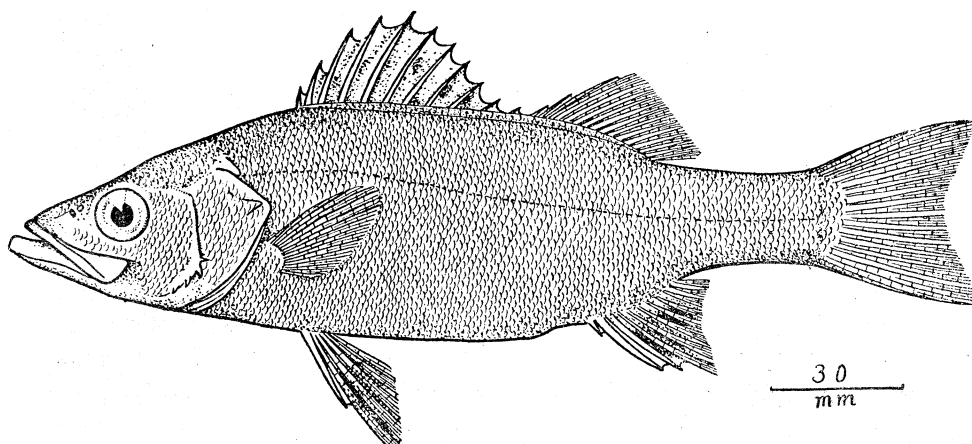


Fig. 2. Lateral view of *Lateolabrax latus*, n. sp. Holotype, No. 1927, 182 mm in standard length (222 mm in total length).

Body elongate, somewhat high and compressed. Mouth large ; lower jaw projecting ; maxillary extends to below posterior border of pupil ; interorbital space slightly convex, slightly wider than eye diameter ; anterior nostril larger than the posterior one ; villiform teeth on jaws and palatines, those triangular patch with moderately concave base on vomer. Preopercle finely serrated on posterior margin ; the angle with two spines, directed backward and downward ; two antrorse spines on the lower border ; opercle with two spines, bony margin between the two spines deeply and roundly concave ; subopercle and interopercle smooth. Gill-rakers long and slender, slightly longer than gill-lamella. Two dorsals, connected at their bases ; the base of spinous dorsal longer than that of soft dorsal ; caudal emarginated ; pectoral shorter than ventral ; ventral inserted behind the lower base of pectoral. Scales small, ctenoid ; mandible with a row of scales near to the tip ; lateral line slightly curved.

Coloration : In preservative, greyish brown, paler below ; dorsal dusky with black spots ; caudal dusky ; ventral and anal blackish ; pectoral pale.

The above description is based upon the holotype.

The dimensions of the paratypes run as follows : D. XIII, 15 or 16 : A. III, 9 or 10 ; P. 16 or 17 ; pored scales in lateral line to caudal base 71 to 76 ; scales in a row from dorsal origin to lateral line 13 to 15, from lateral line to anal fin origin 14 to 16 ; gill-rakers on first arch 8 or 9+15 to 17=24 or 25. Head length 3.10 to 3.31 in body length ; greatest body depth 3.28 to 3.87 ; distance from origin of ventral to that of anal 2.56 to 2.87. Snout length 3.41 to 3.66 in head length ; upper jaw length 2.05 to 2.32 ;

eye diameter 4.41 to 5.18; interorbital space 3.72 to 4.46; postorbital part of head 1.90 to 2.04; length of caudal peduncle 1.57 to 1.87; depth of the same 2.52 to 2.94; pectoral fin length 2.00 to 2.12; ventral fin length 1.61 to 1.81; length of ventral spine 2.52 to 2.90; length of longest dorsal spine 2.12 to 2.42; length of penultimate dorsal spine 8.29 to 11.15; length of last dorsal spine 3.72 to 4.83; length of longest soft dorsal ray 1.96 to 2.16; length of first anal spine 8.25 to 11.15; length of second anal spine 2.41 to 2.68; length of third anal spine 2.52 to 2.68; length of longest anal ray 2.07 to 2.16; caudal fin length 1.32 to 1.42. Length of longest gill-raker on first arch 1.41 to 1.71 in eye diameter; length of longest gill-lamella of the same 1.62 to 2.40. Vertebrae 16 or 17+20=36 or 37 inclusive of hypural. Pyloric coeca 14 to 18. In large specimens the black spots on body generally disappear.

Remarks: Present new species is closely related to *Lateolabrax japonicus* CUVIER and VALENCIENNES, but differs from the latter in the following points.

<i>Lateolabrax latus</i>	<i>L. japonicus</i>
(1) Soft dorsal rays 15 or 16.	12 to 14 (mostly 13).
(2) Soft anal rays 9 or 10.	7 to 10 (mostly 8 or 9).
(3) Greatest body depth 3.31 to 3.87 in body length.	.....3.50 to 4.30.....
(4) Depth of caudal peduncle 2.52 to 2.94 in head length.	.....2.80 to 3.82.
(5) Scales in a row from lateral line to anal origin 14 to 16.	.....18 to 21.
(6) Lower side of mandible with a row of scales.	.....without.....
(7) Bony margin between the two opercular spines deeply and roundly concave.	.....shallowly concave.
(8) Ventral generally dusky.	.....generally pale.

### 3. *Cephalopholis igarashiensis*. n. sp.

Shima-hata (new Japanese name)

Holotype: KATAYAMA's Fish Coll. No. 1930, 283 mm (340 mm), Sumisu-to, Izu Islands, September, 10, 1953, collected by Mr. IGARASHI.

Paratype: No. 39466 (the specimen of Science Faculty Museum of Tokyo University) 253 mm (313 mm), Riukiu Islands.

Description: D. IX, 14 (IX. 14); A. III. 9 (III. 9); P. 18 (18); scale rows above lateral line to caudal base 116 (111); pored scales in lateral line to caudal base 63 (58); scales in a row from anal origin to lateral line 40 (42); from lateral line to middle part of soft dorsal 17 (17); gill-rakers on first arch 9+16=25 (10+15=25). Head length 2.42 (2.34) in body length; greatest body depth 1.95 (2.22); distance from origin of ventral to that of anal 3.25 (3.00). Snout length 3.66 (3.72) in head length; upper jaw length 1.72 (1.77); eye diameter 5.85 (5.40); interorbital width 5.32 (5.68); postorbital part of head 1.86 (1.93); length of caudal peduncle 2.55 (3.00); depth of the same 2.60 (2.70); pectoral fin length 1.70 (1.80); ventral fin length 1.75 (1.89); length of ventral spine 3.66 (3.37); length of longest dorsal spine (3rd one) 2.72 (2.84); length of last dorsal spine 3.55 (4.00); length of longest soft dorsal ray (6th one) 2.44 (2.34); length of first anal spine 7.80 (7.70); length of

second anal spine 3.66 (3.85) ; length of third anal spine 3.55 (3.98) ; length of longest anal ray (4th one) 2.17 (2.35) ; caudal fin length 2.02 (1.96). Length of longest gill-raker on first arch 1.82 (1.66) in eye diameter ; length of longest gill-lamella of the same 2.10 (2.10).

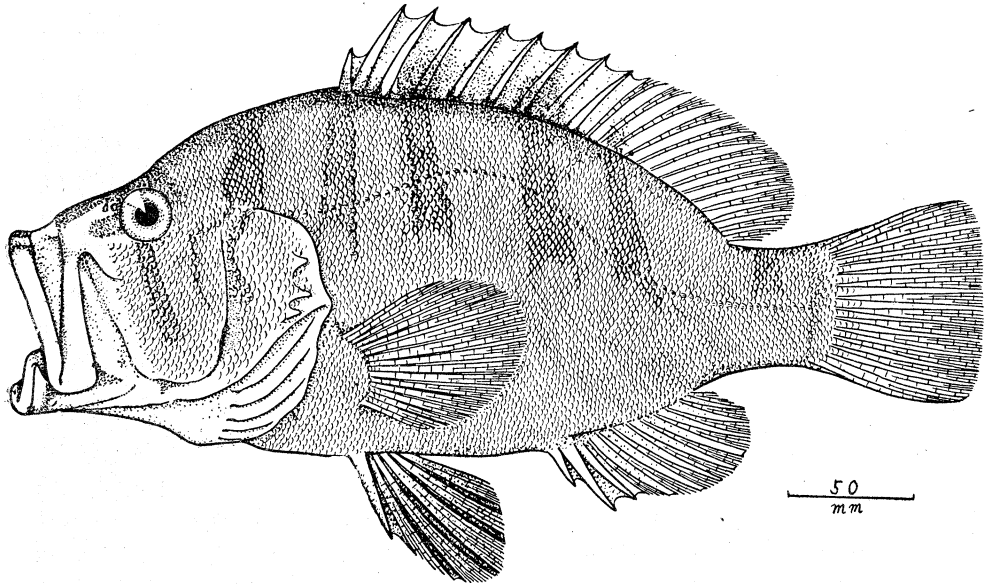


Fig. 3. Lateral view of *Cephalopholis igarashiensis*, n. sp. Holotype : No. 1930, 283 mm in standard length (340 mm in total length).

Body oblong, compressed ; back elevated, dorsal outline concave above eye ; mouth large, very oblique ; maxillary reaches to below posterior margin of orbit ; interorbital space slightly convex, about as wide as eye diameter ; one to three canine on each side of symphyses in each jaw ; teeth on middle of side of dentary in three or four rows ; teeth on palatines in a narrow band ; those on vomer in a narrow  $\wedge$ -shaped band. Preopercular border rounded and finely serrated ; middle opercular spine nearer to the lower than to the upper ; subopercle and interopercle serrated. Gill-raker long, the longest one on first arch longer than longest gill-lamella of the same arch. Caudal subtruncate ; pectoral rounded ; ventral inserted below lower base of pectoral. Scales rather small, ciliated ; auxiliary scales absent ; lateral line strongly curved. Pyloric coeca 5.

Coloration : In preservative, body yellowish, with seven vertical bars, the first under middle of eye, the second a saddle, midway from eye to origin of dorsal descending to preopercular border, the third at origin of dorsal, the fourth under 4th dorsal spine, the fifth between the 7th and the 8th dorsal spines, the sixth under the 3rd soft dorsal, and the seventh middle of caudal peduncle ; the 4th, 5th and 6th bars descending obliquely backward ; top of snout dark purple ; a blotch of same color in front of eye ; basal part of dorsal encroached on by the bars on body ; ventral dark ; other fins pale.

Remarks : This new species is distinguished from other species of *Cephalopholis* in having higher body and different coloration.

#### 4. *Epinephelus truncatus*, n. sp.

Akahata-modoki (new Japanese name)

*Epinephelus fasciatus albopunctulatus* MASUDA, 1942 : 113, pl. 5, lower fig. (Bonin Islands).

Holotype : KATAYAMA's Fish Coll. No. 1940, 320 mm (382 mm), Torishima, Izu Islands, March 10, 1954.

Paratype : KATAYAMA's Fish Coll. 1941, 229 mm (273 mm), Bonin Islands, July 12, 1952.

Description : D. XI, 17 (XI, 16) ; III, 8 (III, 8) ; 19 (19) ; p. scale rows above lateral line to caudal base 135 (138) ; pored scales 70 (71) in lateral line to caudal base ; scales in a row from anal origin to lateral line 35 (34) ; from lateral line to base of soft dorsal 14 (13) ; gill-rakers on first gill-arch  $7+15=22$  ( $7+15=22$ ). Head length 2.56 (2.51) in body length ; greatest body depth 2.99 (2.93) ; distance from origin of ventral to that of anal 3.05 (3.51). Snout length 4.47 (4.14) in head length ; upper jaw length 2.55 (2.46) ; eye diameter 5.20 (4.55) ; interorbital width 7.35 (6.75) ; postorbital part of head 1.67 (1.78) ; length of caudal peduncle 2.55 (2.60) ; depth of the same 3.68 (3.96) ; pectoral fin length 1.74 (1.68) ; ventral fin length 2.23 (1.98) ; length of ventral spine 4.16 (3.50) ; length of longest dorsal spine (3rd one) 2.98 (2.84) ; length of last dorsal spine 3.79 (3.64) ; length of longest dorsal ray (7th one) 2.55 (2.34) ; length of first anal spine 7.35 (6.50) ; length of second anal spine 3.58 (2.84) ; length of third anal spine 3.78 (3.13) ; length of longest anal ray (4th one) 2.55 (2.12) ; caudal fin length 2.02 (1.94). Length of longest gill-raker on first arch 2.66 (2.50) in eye diameter ; length of longest gill-lamella of the same arch 2.67 (3.33).

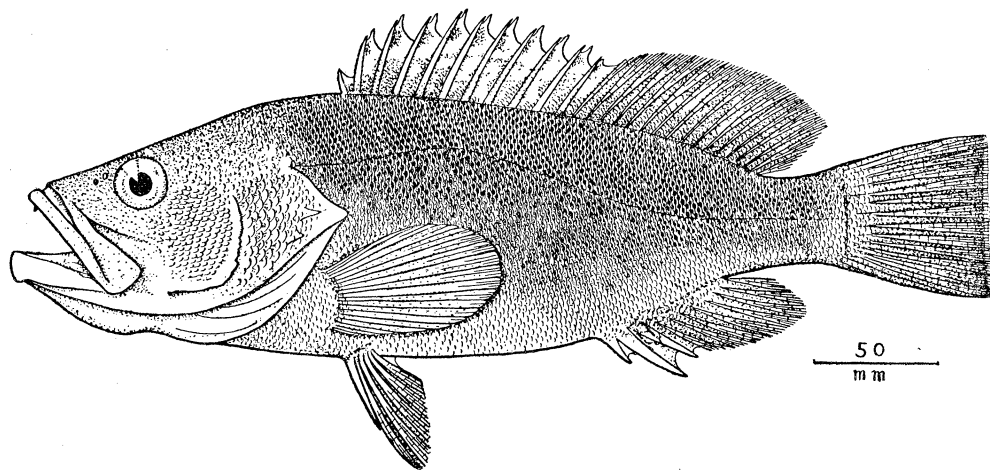


Fig. 4. Lateral view of *Epinephelus truncatus*, n. sp. Holotype: No. 1940, 320 mm in standard length (382 mm in total length).

Snout pointed ; upper profile of head straight ; interorbital space flat, 1.41 (1.48) times in eye diameter ; maxillary reaches to below posterior margin of pupil ; a pair of canine on each side of symphyses in each jaw ; teeth on middle of side of dentary in three or four rows ; teeth on palatines in a narrow band, those on vomer in a narrow

Λ-shaped band. Preopercular border rounded, the serrae somewhat enlarged at angle ; opercular flap pointed ; upper border of opercle convex ; middle opercular spine slightly nearer to the lower than to the upper ; subopercle and interopercle smooth. Gill-rakers longer than gill-lamellae. Caudal truncate ; ventral inserted slightly behind lower base of pectoral. Scales ciliated ; small auxiliary, basal scales well developed in adult. Interorbital region of frontals concave and rather narrow, the width at middle of orbits 5.60 times in base of cranium ; supraoccipital crest moderately high ; frontal crest rather high ; vertebrae 10+13+hypural ; pyloric coeca 46.

Coloration ; In spirit, body dark red ; each scale with a basal spot of greenish brown ; membranes between dorsal spines tipped with black ; other parts of dorsal olive ; upper several rays of caudal olive, the rest of the fin red, with a dark submarginal area and a white edge ; other fins red. In preservative, body pale brown ; each scale with a dark basal spot ; membranes between dorsal spines tipped with black, other part of dorsal brown ; upper part of caudal brown, rest of the fin pale grayish brown, with a dark submarginal area and a white edge ; other fin pale brown.

Remarks : Present new species is closely related to *E. albopunctulatus* BOULENGER, but differs from the latter in the following points.

*E. truncatus*

- (1) The 4th dorsal spine longest.
- (2) Maxillary reaches to below posterior margin of orbit.
- (3) Each scale with a basal spot of grayish brown.

*E. albopunctulatus*

- The second dorsal spine longest.
- ..... posterior margin of pupil.
- Each scale with a white basal spot.